

# The impact of flood relief funds on affected people's social wellbeing in Pakistan

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## ABSTRACT

The monsoon season triggered the worst floods in Pakistan's history, wiping out whole towns and putting an estimated 3.4 million children at risk of water contamination, drowning and famine. This research used a literature review and a survey of first-hand accounts to investigate how distributing flood relief aid in Pakistan affected the social well-being of those who received aid between August and September 2022. Affectees' social well-being increased after receiving social assistance (relief funds) and decreased after a natural disaster. Interviews and discussions about flood relief funds and financial support to affectees of the 2022 Pakistani flood also revealed much emotional and knowledge-based support from interviewees. Not to mention the unity that the country's many parts reflect via their cooperation. Affected communities get substantial assistance from natural disaster management teams, local teams, non-governmental organizations and private citizens. In the aftermath of a natural catastrophe, businesses and individuals from all walks of life band together to provide financial aid to those impacted by the flood. In addition, they received material to aid in building supplies for their homes and businesses. Not only that, but also the non-monetary aid provided to flood victims in the form of food, survival equipment and the restoration of a nation's economy. Similar criticism was leveled at how governments collected and dispersed flood relief funding, how natural disasters were managed and how those affected by floods were rebuilt. Improved disaster preparedness and response and more resilient rural infrastructure were among the study's recommendations. Predicting future climatic and environmental changes may also be aided by bettering natural information warning and natural disaster management systems and enhancing the efficiency and competence of urban-rural people with educational facilities.

**Keywords:** Flood relief funds, social wellbeing, natural disaster, flood affectees, Pakistan.

## 1. INTRODUCTION

The history of heavy monsoon rains and flooding washing away villages, killing millions of humans and livestock and increased risk of health diseases and malnutrition. Thousands of house-holds have been destroyed with health facilities, water and sanitation system, education and infrastructure. Millions of children and families are living without drinking water, food and livelihood and

extensive range of new flood- associated risks and hazards damaged national assets of an economy (UNICEF, 2022). According to McGlade et al., (2019), extreme events such as floods and heavy rains influence the lives of millions of people in every year and increase due to huge environmental and climate change and growing population density and larger numbers of people living in disaster-prone areas.

The environmental associated issues are major cause to increase in climate change with significant and badly influence on public health and social wellbeing. Extensive floodwater catastrophes may have negative repercussions on population health, including water-borne infections, accidents and fatalities, as well as irreversible health repercussions, including adverse preterm birth in a nation (Alderman et al., 2012). According to Rohwerder and Szyp, (2022) the social assistance enhances the household income, consumption level, reduce social disturbance, reduce life of risk, improve health, education and social wellbeing. Revi et al., (2014) argued that the action of the urban human and environment is the main indicator to successful global climate change adaptation. The Urban area and higher number of population and house at risk from climate change as well as large-scale monetary activities, societal capital and buildings situated on adjacent surfaces are especially vulnerable to enormous dangers caused by global warming.

Pakistan economy faced rigorous weather condition in year 2022 with widespread flooding and landslides and calamity hit. According to a study from USAID, about 33 million people in Pakistan are in danger from floods (USAID, 2022). Approximately 1033 individuals died and another 1527 were wounded between June and August 2022. More than 71,900 cattle were lost nationwide, while 287,000 homes were destroyed or severely damaged. Approximately 3500 kilometres of roads and 149 crossings were destroyed and the flood ruined nearly 2 million hectares of agriculture and trees throughout the nation. Of these, 304,475 acres were in Balochistan, 178,186 were in Punjab and roughly 1.54 million were in Sindh. The Ministry of Foreign Affairs (MOFA, 2022) has approved flood relief funds to assist those impacted by the country's severe rainfall and torrential rains. Financial records for the Fund will be kept by the Accountant General Pakistan Revenue on behalf of the National Disaster Management Authority (NDMA). After extensive flooding throughout the nation, the Asian Development Bank (ADB, 2022) authorized a \$3 million grant to aid disaster relief operations.

Natural disasters significantly harm the nation's development objectives since they result in a massive number of human deaths and the loss of infrastructure. Natural catastrophes need to be emphasized more and a natural disaster mitigation unit has to be established so that the human and material costs may be assessed and rapid recovery attempted for world development. Foreign investment and aid support programs will accelerate the pace of the national economy for sustainable growth. At the same time, disaster response plans for the integrated nation will help decrease human mortality and physical losses. When a natural catastrophe threatens a country's progress, the best action is to take preventative steps and put proactive measures in place to mitigate the damage (Qureshi et al., 2019). The rich and diverse natural resources are being used up at a quicker rate than they can be replenished, according to a study by Akhter et al., (2019).

In Pakistan, the situation is far worse. Therefore, the government should develop a methodical approach to determining the protectoral community duties necessary for maintaining and restoring these natural resources. According to Abbas Khan et al., (2019), natural catastrophes must be more severe. A natural hazard control unit must be established so that the human and infrastructural costs may be assessed and a rapid recovery attempted to ensure global prosperity. Both inside and outside migration should be reduced; controlling prices, improving energy and water facilities, promoting the capital market and lowering medical costs are all possible disaster countermeasures. These strategies require well-coordinated efforts in advance of science, preparation, training and the initial speed of disaster response.

### **The search for the scholarly artifacts**

The social well-being of flood victims has been studied and the effects of relief donations have been researched in the earlier literature. Between 2000 and 2019, Cavallo et al., (2021) studied the effects of natural disasters on lower-middle-income nations' health expenditure, urbanization, gross fixed capital creation and GDP per capita. According to the data, health care spending is positively related to GDP per capita and population concentration in cities also correlates positively with GDP per capita. Natural catastrophes have a long-term unidirectional effect on health care spending relative to GDP per capita. In contrast, health care spending has a bidirectional effect on the concentration of the urban population. Using data from 100 nations over 30 years, Atsalakis et al., (2021) analyzed the correlation between natural catastrophe frequency and GDP per capita growth.

The findings of the research showed that natural catastrophes dampen economic development. Furthermore, the beneficial impact of natural catastrophes varies across several permutations of economic growth quantile and natural disaster quantile. Using in-person interviews with 450 flood survivors on a 4-point Likert scale, Akbar et al., (2022) analyzed how different demographic groups in South Punjab, Pakistan, were impacted by the 2010 floods. There was no statistically significant difference between the

sexes or the number of people in a household when considering any of the four scales used in the research. There is also a strong relationship between formal education, employment, land ownership, yearly income, marital stability and social capital. In addition, more significant levels of land, income and government job replies correlate with greater social capital levels. Government and disaster management agencies were urged to plan to prevent weather and climate damage. The report emphasized the need to appreciate and encourage public and private sector involvement in improving societal well-being.

In a case study of the Charsadda District in Khyber Pakhtunkhwa, Pakistan, Hamid et al., (2022) used questionnaire-based interviews with 210 rural families to investigate the connection between flood exposure and social vulnerability. Due to the most significant number of flood sites, lowest altitudes and closest proximity to rivers, the southern regions were the most socially susceptible in the research. Larger households, including those with older members, more children and more women, as well as higher rates of illiteracy and lower levels of financial stability, are more likely to be impacted by flooding. According to the research, educating people about the dangers of flooding and providing them with the skills they need to protect themselves is key to minimizing the effects of extreme precipitation. In addition, it provides means of subsistence and employment to low-income families to strengthen their economic standing and cut down on poverty. Ao et al., (2022) used 360 rural households in China to study the impact of livelihood capital on the strategies used by farmers in flood-prone locations. The research found that a family's educational degree correlates positively with their choice of economic survival tactics. As an added complication, the position of a family's home in proximity to rivers has a detrimental impact on the methods by which the family makes a living. There is also a favourable correlation between financial resources and humanitarian aid accounts.

According to the research, flood-prone rural communities have effective short- and long-term flood damage reduction methods designed and implemented. Also, the provincial government keeps local farmers up-to-date with information timely, helping them mitigate the financial impact of floods on their crops, livestock and other valuables. Over the 2014 flood scenario in Malaysia, Yusoff and Yusoff, (2022) investigated catastrophe risk management and adaptive activities from a human-based approach. The research shows that more social assistance and attempts to adapt following the floods were provided. Further, the availability of flood management team facilities is correlated with less flood damage. The study recommended boosting natural disaster funding and R & D and raising social awareness among academics and students. In addition, there is better social and economic assistance for flood-affected areas, which helps to cut down on human casualties.

After the devastation caused by Hurricanes Katrina and Rita and again in 2016, Cherry et al., (2022) studied the correlation between religious observance and social assistance. Findings from this study show a link between the generosity of the elderly and the recovery of flood victims. Also, those with strong religious convictions, strong social networks and a strong capacity for resilience get more help. Moreover, the amount of resistance has little bearing on flood damage. Evidence from the research indicated that receiving social assistance may boost individuals' and families' ability to provide for their necessities, their health, education, overall well-being and the economy's productivity. Natural capital depletion and the effects of natural catastrophes on people's well-being in China were studied by Lu and Sohail, (2022). Long-term, positive associations were found between natural capital and subjective measures of well-being, such as health and happiness. As an added downside, natural catastrophes have a vast and harmful impact on people's long-term pleasure and well-being. Having natural capital is associated with increased happiness in the near term. The correlation between carbon emissions and social welfare is negative and statistically significant. The research urged readers to lessen their environmental impact by not properly caring for the planet and its resources and to increase their efforts to protect natural capital. It is also essential to improve the risk and emergency assessment model to maximize the usefulness of natural capital and lessen the impact of natural catastrophes. The effects of climate change catastrophes on the well-being of rural-urban Indonesians were studied by Rahman et al., (2022).

A substantial and negative correlation was found between inhabitants' satisfaction levels in Indonesia and the frequency of natural catastrophes. Also, climatic calamities affect urban dwellers more than their rural counterparts. Not only do climatic catastrophes disproportionately negatively impact urban dwellers, but they also dramatically dampen the subjective well-being of the low-income city and rural dwellers alike. A more robust rural infrastructure and more preparation for climate catastrophes were recommended. Additionally, educational facilities and natural information warning systems may increase the effectiveness and competence of both urban and rural populations. Benali, (2022) analyzed the effects of natural disasters on GDP growth and private/public sector expenditure in low and medium-income nations from 1960 to 2018. Research showed that floods and other natural calamities had a detrimental effect on economic development in the near term. Drought, storms and earthquakes also have a negative and negligible impact on economic development. Natural calamities, such as floods and earthquakes, have little effect on economic development in the long term and may even boost private sector investment. Increased frequency and coverage of natural catastrophes and recommendations to boost public and private investment to mitigate their effects were among the study's key findings and recommendations.

Healthcare problems (Sarkar, 2022), food risk issues (Rasool et al., 2022), agricultural production delays (Ahmad & Afzal, 2022), climate change problems (Rehman et al., 2022) and social vulnerability are just a few of the concerns that the disastrous floods in Pakistan pose, resulting to the worst effects for the economy (Hamidi et al., 2022). In order to move toward a more resilient method of disaster management, the nation needs to devise a plan of action to adopt climate change policies, lessen the extent of damage to healthcare systems, protect itself from disasters on a larger scale and find solutions to problems with food distribution using national and international flood relief funds.

The research makes the following hypotheses based on the debate that was presented:

H1: Natural disasters have an unfavourable effect on human health, economic growth and physical infrastructure across the globe.

H2: Natural disasters are likely to deal with national and international disaster relief funds via transparent economic systems, and

H3: Disburse funds to all affectees is likely to support their livelihoods through sound disaster management centers.

Pakistan's 2022 flood ruined hundreds of thousands of homes, public health institutions, desalination facilities and organizations. Children live outside with their parents since the floods devastated their houses and they cannot maintain themselves financially or nutritionally. Children and their families have clean water, emergency medical treatment, nutritional supplements and hygiene kits thanks to government and nonprofit aid, making them survive early malnutrition and diseases.

## 2. STUDY SETTING

The study surveyed a sizable number of intellects about to ask their responses about flood relief funds and their implication on flood affectees' social well-being, which includes the following:

Healthcare Professionals

Academic Professionals

Financial Experts

Religious Scholars

NGOs

Common Man and

Economists

The collected responses have been screened out, and different vital factors would be helpful for the policymakers to devise long-term sustained natural disaster management policies for Pakistan.

## 3. INFORMATION PROCESSING

Most of those polled in the health sector believe that the money and food donated to the cause of flood relief were put to good use in encouraging the development of flood victims in Pakistan. Protecting one's health and that of one's family by practicing good hygiene and keeping one's home and yard clean are two of the most common pieces of advice given to flood victims. The ability to safely consume water that has been boiled has the potential to reduce the prevalence of several diseases. Local and provincial government's efforts to prepare their citizens for emergencies might also be highlighted in this way. Pakistani teachers have spoken out against the government's handling of flood relief funding and the welfare of individuals impacted by the tragedy, saying that the government and its administration are not performing their jobs legitimately.

The government should use the money it gets from taxes and other contributions toward helping the people who were impacted by the floods. Responders emphasize education and give resources such as money, food and clothes to help flood victims recover and rebuild their lives. Many banking sector respondents also urged the government to update its disaster management system by importing foreign technology and tools for improved disaster prediction. Experts in Islamic studies share their thoughts on the significance of social welfare for the flood victims in Pakistan, emphasizing the need to come together and help one another in times of crisis. Government agencies have "done their job" and "spent the money in time to save the flood victims' lives," "Now, it is up to the rest of us to pitch in with donations of money, food and other supplies.

People from many walks of life, from business owners and professors to students and teachers, responded that the government was not doing enough to help individuals affected by the floods. Both individuals and the government in Pakistan are feeling the pinch of increasing food and tax prices. In order to help flood victims recover and rebuild, the government provides generous funding. The public and students donated money and food to help individuals in the country who had been affected by the recent floods. The NGOs who participated in a poll about flood aid in Pakistan shared their thoughts on the issue, recommending that the government priorities the social well-being of individuals impacted by the tragedy and take action against corruption in recovery efforts. Until the flood victims of Sindh and KPK have been permanently moved, the distribution of food and new clothes will

continue. Free agricultural and vegetable seeds, clean water facilities, clear transportation and communication links and free health and education services are just some ways that the economists recommend that contributions be put to use for the flood victims. With the devastation, cost and needs assessed by the post-disaster performance appraisal, it may be possible to have a clearer understanding of the magnitude of the resources required for rehabilitation and reconstruction.

However, for Pakistan to rebuild itself dependably and sustainably, the nation's recovery and reconstruction needs are likely to outweigh the resources available to the country. Pakistan's neighbors and partners are suffering from the global economic slump. Experts discovered that the severe flood significantly impacted human health, resulting in increased mortality tolls, infrastructural damages, animal fatalities and damage to physical infrastructures. National and international aid organizations step in to help those whose lives have been devastated by the flood. Thus, there is an urgent need for transparent financial systems to distribute funds to the privileged. Flood victims require sound disaster management centers so they may rebuild their lives and incomes with government aid.

#### 4. STEP FORWARD

Through a literature review and an expert poll, this research examined the impact of flood relief money on the social well-being of Pakistani flood victims and offered policy recommendations based on its findings.

##### **Establishment and administration of flood relief funding facilities used for flood affectees redevelopment**

There should be a proper check and balance on flood relief funds. They should be free of corruption and other social ills. The method of collecting flood relief money should be refined. The natural catastrophes system should be developed by international standards and all means of subsistence for flood victims are provided by disaster relief money.

##### **Restoration of Agriculture and Livestock for Flood Victims**

Provision of cultivation facilities, seed for revitalization of crops and vegetables. Protection of surviving live stock through feeding and vaccination. Utilizing chemical processes to remove the corpses of animals and ensure the safety of the surviving live stock. The distribution of long-term and short-term agricultural subsidies to flood victims, flood-affected farmers and ranchers and the rebuilding of a livestock shelter as well as the infrastructure and equipment for irrigation.

##### **Reconstruction of flood victims' water and sewage systems and the establishment of health centers**

Donate the necessary mosquito nets, face masks, hand sanitizer and other life-saving items. Establish an effective method of tracking the health of the impacted population. Renovate and mend healthcare establishments. Educate the afflicted people about health and illness and turn on the water purification systems and fix the plumbing.

##### **Household, housing, food, and life-sustaining facility construction for flood victims**

Supply standardized food products for basic sustenance and to fill up a person's basic needs. Give them safe somewhere to stay temporarily and enough money to repair the damage caused by the cursed floods. Children and nursing mothers should be given priority, so be sure to provide them with nutritional resources and encouragement. Give the flooded area the care and attention it deserves by keeping an eye on things, keeping an accurate tally of the damage and assistance in the form of monetary aid, food and other necessities for subsistence as time goes on.

##### **Establishment and rebuilding development of flood-affected individuals' infrastructure (health, education, roads, bridges)**

The appropriate handling of an emergency requires training and managerial facilities, which must be made available. Repair and renovate the public health, educational, transportation and information networks such that they meet or exceed worldwide benchmarks. For every urgent scenario, it's important to have a solid emergency plan in place. Offer time-dependent and evolving programs for social awareness and putting up medical camps and providing access to additional emergency equipment.

The moment has come to help the people of Pakistan affected by the recent floods. These people need massive national and international flood relief donations to keep from starving to death or contracting a deadly illness. Millions of damaged homes, livestock deaths, roads and communications being destroyed, massive food challenges issues rising, academic institutes being undergoing water, death tolls increasing and a lack of formal jobs available to the affected all require special attention to be resolved through national and international collaborations and knowledge transfers.



**Ethical approval**

Not applicable.

**Informed consent**

Not applicable.

**Conflicts of interests**

The authors declare that there are no conflicts of interests.

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**Data and materials availability**

All data associated with this study are present in the paper.

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